UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,492	08/27/2003	Chris Bender	FORE-104	5890

7590 05/02/2008

Ansel M. Schwartz
Suite 304
201 N. Graig Street
Pittsburgh, PA 15213

EXAMINER	
GREY, CHRISTOPHER P	
ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
05/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/649,492	BENDER ET AL.	
	Examiner	Art Unit	
	CHRISTOPHER P. GREY	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-6,9,11 and 12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,9,11 and 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 4-6 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 recites the limitation, "the OAM matrix maintaining the connection during times of reroute, reset, failover or reboots." However, from page 8 lines 1-5 of the specification, during times of reroute, reset, failover and reboots, configuration is maintained. The configurations specified in the specification is different than connections as claimed, thus the specification does not enable the claimed maintenance of a connection. Similar issues exist with respect to claim 6.

Claim Objections

3. Claim 4 and 5 are objected to because of the following informalities: Claims 4 and 5 depend on a cancelled claim 3. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made

4. Claims 1, 4, 6, 9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilnk (US 20050147050) in view of Gruber et al. (US 6563795), hereinafter referred to as Gruber.

Regarding claim 1 Klink discloses a first node and second node **(fig 2 TLN 1 and TLN 2 respectively)** in communication with the network (see fig 1 for network).

Klink discloses at least one intermediate node in communication with the first node and the second node through the network **(fig 2, N1-N4 are equivalent to intermediate nodes and form a network)**, the first node repeatedly **(para 0034, connectivity is checked repeatedly every time an MPLS network is brought into service or every time a complaint is made)** sending signaling **(para 0041, process can be achieved in that signaling methods are used)** through the intermediate node to the second node **(para 0032, OAM-ECHO packet sent in the source and para 0036)** and receiving the signaling back **(para 0039, feedback)** to establish and maintain

a connection between the first node, second node and intermediate node **(para 0034, checks connectivity of path).**

an OAM matrix for placing connection points along the path through which the connection is established **(para 0037, location ID is inserted into OAM ECHO packet, where the location ID contains the assigned connection point)** each time after signaling from the first node to the second node returns to the first node **(para 0039, copied OAM-ECHO packet, containing assigned connection point/s is sent back to source).**

The OAM matrix creates fault management and performance monitoring conditions in the first second and intermediate nodes **(para 0021, discusses monitoring and para 0005 discusses fault management)**

Identifying the connection points **(para 0037, location ID is inserted into OAM ECHO packet, where the location ID contains the assigned connection point)** and the fault management and performance monitoring conditions **(para 0021, discusses monitoring and para 0005 discusses fault management)**

And instructs signaling code where to place connection points and types across the connection **(para 0037, ID of connection point is inserted into OAM ECHO packet which is equivalent to signaling, and paras 0022-0023 define the types of connections A and B)**

the OAM matrix maintaining the connection during times of reroute rest failover or reboot **(where a connection is obviously maintained b/w two endpoints in the event of failover or reroute)**

Klink does not specifically disclose the OAM path matrix disposed at each node and the OAM matrix being global across the network.

Gruber discloses the OAM path matrix disposed at each node and the OAM matrix being global across the network **(Col 4 lines 40-47, discusses the monitoring and tracing occurring at any node and is hence global seeing that the functionality is capable at each node within the network).**

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method and examination of connectivity of Klink, as taught by Gruber, since stated in the abstract that such a modification will provide better management by identifying nodes through which a connection is routed between 2 nodes.

Regarding claim 4, Klink does not specifically disclose the placing means placing the connection points according to the OAM path matrix based on a number of hops to the second node from the first node.

Gruber discloses the placing means placing the connection points **(Col 1 lines 33-35, where the node is equivalent to a connection point, and Col 3 lines 6-10, where placing occurs when the identity of the node/CP is found and traced)** according to the OAM path matrix based on a number of hops to the second node from the first node **(Col 4 lines 10-11, where the identity of a node i links or i hops away can be found, where identifying this node from the loopback cell thus places a connection point).**

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method and examination of connectivity of Klink, as taught by Gruber, since stated in the abstract that such a modification will provide better management by identifying nodes through which a connection is routed between 2 nodes.

Regarding claim 6, Klink discloses sending signaling repeatedly from a first node through an intermediate node to a second node of a network, the first node, second node and intermediate node defining a path **(para 0041, process can be achieved in that signaling methods are used and para 0034, connectivity is checked repeatedly every time an MPLS network is brought into service or every time a complaint is made and fig 2, N1-N4 are equivalent to intermediate nodes)**;

receiving the signaling back at the first node to establish and maintain a connection between the first node, second node and intermediate node **(para 0039, feedback and para 0034, checks/maintains connectivity of path)**; and

placing connection points dynamically along the path through which the connection is established **(para 0037, location ID is inserted into OAM ECHO packet, where the location ID contains the assigned connection point)** after signaling from the first node to the second node returns to the first node **(para 0039, copied OAM-ECHO packet, containing assigned connection point/s is sent back to source)**,

including creating fault management and performance monitoring conditions in the first, second and intermediate nodes**(para 0021, discusses monitoring and para 0005 discusses fault management)**

And instructs signaling code where to place connection points and types across the connection **(para 0037, ID of connection point is inserted into OAM ECHO packet which is equivalent to signaling, and paras 0022-0023 define the types of connections A and B)**

the OAM matrix maintaining the connection during times of reroute rest failover or reboot **(where a connection is obviously maintained b/w two endpoints in the event of failover or reroute)**

Klink does not specifically disclose an OAM matrix disposed at each node and the OAM matrix being global across the network

Gruber discloses an OAM path matrix disposed at each node **(Col 4 lines 40-47, discusses the monitoring and tracing occurring at any node and is hence global seeing that the functionality is capable at each node within the network).**

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method and examination of connectivity of Klink, as taught by Gruber, since stated in the abstract that such a modification will provide better management by identifying nodes through which a connection is routed between 2 nodes.

Regarding claim 9, Klink does not specifically disclose the placing means placing the connection points according to the OAM path matrix based on a number of hops to the second node from the first node.

Gruber discloses the placing means placing the connection points **(Col 1 lines 33-35, where the node is equivalent to a connection point, and Col 3 lines 6-10, where placing occurs when the identity of the node/CP is found and traced)** according to the OAM path matrix based on a number of hops to the second node from the first node **(Col 4 lines 10-11, where the identity of a node i links or i hops away can be found, where identifying this node from the loopback cell thus places a connection point).**

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method and examination of connectivity of Klink, as taught by Gruber, since stated in the abstract that such a modification will provide better management by identifying nodes through which a connection is routed between 2 nodes.

Regarding Claim 11 Klink discloses a first node and second node **(fig 2 TLN 1 and TLN 2 respectively)** in communication with the network **(fig 1 or fig 2, where all of the components combined is equivalent to a network).**

at least one intermediate node in communication with the first node and the second node **(fig 2, N1-N4 are equivalent to intermediate nodes)** through the network **(fig 2, where intermediate nodes N1-N4 are considered to be within a network)**,

the first node repeatedly **(para 0034, connectivity is checked repeatedly every time an MPLS network is brought into service or every time a complaint is made)** sending signaling **(para 0041, process can be achieved in that signaling methods are used)** through the intermediate node to the second node **(para 0032, OAM-ECHO packet sent in the source and para 0036)** and receiving the signaling back **(para 0039, feedback)** to establish and maintain a connection between the first node, second node and intermediate node **(para 0034, checks connectivity of path).**

Means for placing connection points along the path through which the connection is established **(para 0037, location ID is inserted into OAM ECHO packet, where the location ID contains the assigned connection point)** after signaling from the first node to the second node returns to the first node **(para 0039, copied OAM-ECHO packet, containing assigned connection point/s is sent back to source).**

The placing means also creates fault management **(para 0005 discusses fault management procedures)** and performance monitoring condition **(para 0030 discusses performance monitoring)**

Identifying the connection points at a node (para 0037)

Identifying fault management and performance monitoring at a node **(para 0021, discusses monitoring and para 0005 discusses fault management)**

Klink does not specifically disclose the placing means includes an OAM path matrix disposed at each node and the placing means placing the connection points according to the OAM path matrix based on a number of hops to the second node from the first node.

Gruber discloses the placing means includes an OAM path matrix disposed at each node **(Col 4 lines 40-47, discusses the monitoring and tracing occurring at any node)**

and the placing means placing the connection points **(Col 1 lines 33-35, where the node is equivalent to a connection point, and Col 3 lines 6-10, where placing occurs when the identity of the node/CP is found and traced)** according to the OAM path matrix based on a number of hops to the second node from the first node **(Col 4 lines 10-11, where the identity of a node i links or i hops away can be found, where identifying this node from the loopback cell thus places a connection point).**

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method and examination of connectivity of Klink, as taught by Gruber, since stated in the abstract that such a modification will provide better management by identifying nodes through which a connection is routed between 2 nodes.

Regarding claim 12, Klink discloses sending signaling repeatedly from a first node through an intermediate node to a second node, the first node, second node and intermediate node defining a path **(para 0041, process can be achieved in that signaling methods are used and para 0034, connectivity is checked repeatedly every time an MPLS network is brought into service or every time a complaint is made and fig 2, N1-N4 are equivalent to intermediate nodes)**;

receiving the signaling back at the first node to establish and maintain a connection between the first node, second node and intermediate node **(para 0039, feedback and para 0034, checks/maintains connectivity of path)**; and

placing connection points dynamically along the path through which the connection is established **(para 0037, location ID is inserted into OAM ECHO packet, where the location ID contains the assigned connection point**) after signaling from the first node to the second node returns to the first node **(para 0039, copied OAM-ECHO packet, containing assigned connection point/s is sent back to source)**,

including creating fault management and performance monitoring conditions in the first, second and intermediate nodes**(para 0021, discusses monitoring and para 0005 discusses fault management)**

including the step of identifying the connection points (para 0037, location ID is inserted into OAM ECHO packet) and the fault management and performance monitoring conditions (para 0021, discusses monitoring and para 0005 discusses fault management).

Klink does not specifically disclose OAM (operation and management) path matrix disposed at each node and including the step of placing the connection points according to the OAM path matrix based on a number of hops to the second node from the first node.

Gruber discloses disclose OAM (operation and management) path matrix disposed at each node **(Col 4 lines 40-47, discusses the monitoring and tracing occurring at any node)**

and including the step of placing the connection points **(Col 1 lines 33-35, where the node is equivalent to a connection point, and Col 3 lines 6-10, where placing occurs when the identity of the node/CP is found and traced)** according to the OAM path matrix based on a number of hops to the second node from the first node **(Col 4 lines 10-11, where the identity of a node i links or i hops away can be found, where identifying this node from the loopback cell thus places a connection point)**.

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method and examination of connectivity of Klink, as taught by Gruber, since stated in the abstract that such a modification will provide better management by identifying nodes through which a connection is routed between 2 nodes.

5. Claims 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilnk (US 20050147050) in view of Gruber et al. (US 6563795), hereinafter referred to as Gruber in further view of Patil et al. (US 7313087), hereinafter referred to as Patil.

Regarding claim 5, The combined teachings of Klink and Gruber do not specifically disclose wherein the connection is an ATM SPVX.

Patil discloses wherein the connection is an ATM SPVX **(see abstract for communication b/w switches/nodes being connected via an SPVX connection).**

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Klink and Gruber as taught

by Patil, since stated in Col 1 lines 15-20, that such a modification will provide PVC services via these connections.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER P. GREY whose telephone number is (571)272-3160. The examiner can normally be reached on 10AM-7:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moe Aung can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit 2616

/Christopher P Grey/
Examiner, Art Unit 2616